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SOURCE Newspapers and periodicals as indicated.

MINING CONDITIONS IN THE DONBASS

EJECTIONS OF COAL AND GAS IN DONBASS MINES -- Ugol', No 4, 1953

From 1946 through 20 July 1952, 259 cases of ejections of coal and gas were observed in Donbass mines. Of these, 105, or 40 percent, took place after coal-extraction operations had been discontinued -- for example, during the repair and development work. In 33 percent of the retarded cases, the delay amounted to only a few minutes, but in 4 percent of the cases, the phenomenon was delayed 30 minutes to 3 hours.

A number of cases where the delay was one to 3 hours are cited in tabular form below. In almost all these cases, propping of the working front was either inadequate or entirely absent. The phenomenon occurred in many different types of mine workings.

See table on following page.

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|----------------|-------------------------------------|------|-------------------------------------|--------------|--|--|--|--|--|--|--|--|--|--|--|
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| <u>Case and Date</u> | <u>Location</u> | <u>Seam</u> | <u>Mine</u> | <u>Trust</u> | <u>Amount Ejected</u> |
|----------------------|-------------------------|---------------------------------|---|--------------------|----------------------------------|
| No 1 20 Nov 49 | Eastern face | III Kamenskiy (K ₅) | No 10 imeni Artem | Voroshilovugol' | 17 tons coal, gas |
| No 2 24 Jun 50 | Western passage | Izvestnyachka (520 m level) | Imeni Kalinin | Kalininugol' | 37 tons coal |
| No 3 6 Nov 50 | South crosscut | Devyatka | Kochegarka Mine No 1-3 (750 m level) | | 850 tons coal, 94 tons rock, gas |
| No 4 20 Mar 51 | Passage | Dvoynoy | Mine imeni Karl Marks (east wing) (500 m level) | | 35 tons coal, small amount rock |
| No 5 19 Apr 51 | Haulage passage | Mazur | Mine imeni Karl Marks | Ordzhonikidzeugol' | 40 tons coal, gas |
| No 6 21 Jul 51 | Western face | Mazur | Krasnyy Oktyabr' Mine No 1-2 | Ordzhonikid. ugol' | 258 tons coal |
| No 7 10 Jul 51 | By-pass crosscut | Mazur-Vostok | Mine imeni Karl Marks | | |
| No 8 26 Apr 52 | Crosscut | Tolstyy | Kochegarka Mine No 1-3 | | 400 tons coal, much small rock |
| No 9 20 Jun 52 | Eastern haulage passage | II Kamenskiy (K ₆) | Mine imeni Artem | Voroshilovugol' | 5 tons coal |

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In case No 3, a test of the air in the haulage passage of the Kirpichevka seam, 40 meters distant from the south crosscut, made one hour and 15 minutes after the ejection revealed a 40.6-percent concentration of methane.

In case No 4, there was a 24-percent concentration of methane an hour after the ejection in the passage where the ejection had taken place and a 5-percent concentration in the air current emanating from the section.

In case No 8, a test of air collected 45 meters from the face an hour after the ejection showed a methane content of 56 percent.

ARTYMOGOL' COMBINE MINE USES WASTE ROCK FOR BACKFILLING -- Moscow, Trud, 24 Apr 53

Mine No 19-20 of the Gorlovskugol' Trust of the Artemugol' Combine has solved the problem of rock cut during development work. Transporting this rock underground to the shaft, hoisting it to the surface, and conveying it to dump heaps involved huge unproductive expenditures. According to a far-from-complete estimate, this mine had, during its existence, transported more than 7 million tons of rock to the surface, and this transport had cost 5 million rubles.

Now, a considerable part of the rock is left in the mine. Rock formerly transported to the surface is at present used to backfill worked-out areas. Small pneumatic winches set up in the passages move mine cars filled with rock to an unloading point where they are mechanically dumped. The new method creates conditions for normal roof control. Now, more than half the waste rock remains in the mine.

Many mines in the central Donbass have similar working conditions, among them Nikitovka Mine No 4-5, the Mine imeni Rumyantsev, the Mine imeni Kalinin, Kochegarka, and Mine No 5 imeni Lenin. These mines could also use their waste rock for backfilling.

GORNYAK COMBINE USED IN DONBASS MINES -- Moscow, Master Uglya, No 1, 53

Among the up-to-date machinery being supplied to the USSR coal industry is the Gornyak combine, designed to mechanize the cutting, breaking up, and loading of coal at thin, slightly dipping seams.

In the second half of 1952, the Gornyak combine was lowered to the 100-meter face of Mine No 2-bis of the Voroshilovgradugol' Combine, where the thickness of the seam did not exceed 0.65 meter.

The miners have mastered the operation of the machine, and, starting in October, they organized their work on a schedule to complete one cycle a day with a two-shift extraction system. In October, they mined 3,800 tons of coal; in November, 4,200; and in December, 5,300. The average daily output at the face has risen to 177 tons, as against a plan of 123 tons. In 1953, the miners have set themselves the task of raising the monthly productivity to 7,000 tons.

The Gornyak combine is being successfully utilized in other Donbass mines also.

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MINE SHIPS ABOVE-QUOTA COAL -- Kishinev, Sovetskaya Moldaviya, 24 Mar 53

On 24 March, miners of the mine imeni Rumyantsev shipped eight trainloads of coal in addition to their quota. They have determined to deliver four more above-plan trainloads by 1 May.

OUTSTANDING DONBASS MINE -- Kiev, Pravda Ukrainy, 20 Mar 53

Mine No 26-44 of the Bokovoantratsit Trust in Voroshilovgradskaya Oblast completed the 1953 first-quarter plan on 15 March and was the first mine in the oblast to achieve this performance.

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SOURCE Sbornik Rukovodyashchikh Materialov po Stroitel'stvu, No 4, 1953.

STANDARD DESIGNS OF MAIN BUILDINGS
FOR THERMAL ELECTRIC POWER STATIONS IN THE USSR

In December 1952, the State Committee for Construction Affairs under the Council of Ministers USSR approved drawings and specifications of standard-type main buildings to house thermal electric power stations with capacities of 50,000 to 300,000 kilowatts. The plans were submitted by the Teploelektroproyekt Institute of the former Ministry of Electric Power Stations. Altogether, seven different standard designs, which are described in Table 1 below, were approved. Basic dimensions of the buildings are shown in Table 2 and other information is given in Table 3.

Table 1. Approved Standard Designs

| Type | Capacity (1,000 kw) | Turbines | | Number of Boilers | Steam Production of Boilers (tons/hr) | Type of Mills |
|------|------------------------|----------|------------------------------------|----------------------|--|------------------|
| | | Number | Type and Capacity (1,000 kw) | | | |
| I | 300 | 3 | VK-100 | 7 | 230 | Ball |
| II | 200 | 4 | VK-50 | 5 | 230 | Ball* |
| III | 200 | 4 | VK-50 | 5 | 230 | Pit |
| IV | 50 | 2 | VT-25 | 3 | 170 | Ball |
| V | 50 | 2 | VT-25 | 3 | 170 | Pit |
| VI | 50 | 2 | VPT-25 | 4 | 170 | Ball |
| VII | 50 | 2 | VPT-25 | 4 | 170 | Pit |

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Table 2. Dimensions of Buildings (meters)

| | <u>Type of Station</u> | | | | | | |
|-------------------------------------|------------------------|----------|----------|---------|---------|---------|---------|
| | I | II | III | IV | V | VI | VII |
| <u>Engine Room</u> | | | | | | | |
| Span | 24 | 22 | 22 | 25 | 25 | 25 | 25 |
| Height of platform | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Height of crane tracks | 17 | 17 | 17 | 15.5 | 15.5 | 15.5 | 15.5 |
| Number of cranes and their capacity | 2x100/20 | 1x100/20 | 1x100/20 | 1x75/15 | 1x75/15 | 1x75/15 | 1x75/15 |
| <u>Deaerator Room</u> | | | | | | | |
| Span | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 |
| Height of floor level | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| <u>Bunker Room</u> | | | | | | | |
| Span | 8 | 8 | 8 | 6 | 8 | 8 | 8 |
| Height at top of hoppers | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| <u>Boiler Room</u> | | | | | | | |
| Span | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| Height at bottom of girders | 26.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 |
| <u>Capacity of Cranes</u> | | | | | | | |
| a. For assembling | 30/5 | 30/5 | 30/5 | 30/5 | 30/5 | 30/5 | 30/5 |
| b. For operating | 20/5 | 20/5 | 20/5 | 20/5 | 20/5 | 20/5 | 20/5 |

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Table 3. Data on Capacity and Use

| | Unit | Type of Main Building | | | | | | |
|--------------------------------------|------------|-----------------------|-------|-------|-------|-------|-------|-------|
| | | I | II | III | IV | V | VI | VII |
| Installed capacity | 1,000 kw | 300 | 200 | 200 | 50 | 50 | 50 | 50 |
| Type | | C c n d e n s i n g | | | TETs | TETs | TETs | TETs |
| Number of hours in use | Hr/yr | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 |
| Heat producing capacity of fuel | Cal/kg | 5,660 | 5,660 | 2,300 | 5,660 | 2,300 | 5,660 | 2,300 |
| Fuel consumption | Kg/kw-h | 0.422 | 0.427 | 0.420 | 0.320 | 0.316 | 0.296 | 0.293 |
| Volumetric capacity of main building | 1,000 cu m | 351 | 274 | 273 | 159 | 159 | 183 | 183 |
| Volumetric capacity of main building | Cu m/kw | 1.17 | 1.37 | 1.36 | 3.18 | 3.18 | 3.66 | 3.66 |
| Steel structures | Kg/kw | 12.5 | 16.4 | 15.6 | 20.3 | 22.5 | 22.4 | 25.1 |

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